

Rejection under 35 U.S.C. § 102

**The Office Action rejects claims 8-15 as anticipated by Eom et al, Nature vol. 411 (May 31, 2001) pages 558-560 ("Eom") under 35 U.S.C. § 102 (a).**

The first sentence of the present application claims the benefit of U.S. Provisional Application 60/275,067 ('067). The '067 application was filed on March 12, 2001 and fully discloses pending claim 8. See '067 application, page 5, lines 27-30.

Since the '067 application fully discloses claim 8 and was filed prior to the May 31, 2001 publication date of Eom, Eom is not prior art with respect to claim 8. Thus, Applicants respectfully submit that the rejection based on Eom is improper.

**The Office Action rejects claims 8, 9, 13, 14 as anticipated by U.S. Patent 4,657,774 ("Satou").**

Satou does not disclose growing a layer of  $\text{MgB}_2$  as recited in claim 8. In particular, Satou nowhere discloses that his method produces a layer of  $\text{MgB}_2$ . In addition, even if Satou does disclose evaporating "metallic borides ... containing magnesium", this does not imply that a layer of  $\text{MgB}_2$  is grown, because Satou's method does not grow a layer of the evaporated material. Instead, Satou grows a layer that combines the evaporated material and a simultaneously ion deposited material. See col. 2, lines 43-54. For example, Satou discloses growing layers having stoichiometric amounts of boron and nitrogen by simultaneously evaporating boron and ion depositing nitrogen. Col. 5, lines 32-46. Even Satou's particular process that includes evaporating "metallic borides ... containing magnesium" would produce a layer having stoichiometric amounts of element that is simultaneously ion deposited. For that reason, the method does not grow the layer of the evaporated material. For these reasons, Satou does not suggest "growing a layer ... of the ejected  $\text{MgB}_2$ " as recited in pending claim 8 even if he does arguendo suggest evaporating  $\text{MgB}_2$  to produce a layer. Thus, Applicants respectfully submit that the rejection based on Satou is improper.

For the above reasons, Applicants respectfully request that both rejections of claim 8 be withdrawn. Applicants also request that the anticipation rejections of claims 9 - 15 be withdrawn, because these claims depend on claim 8.

Rejections under 35 U.S.C. § 103

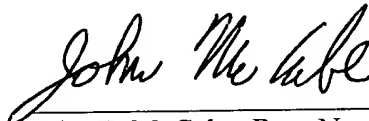
**The Office Action also rejects claims 10 - 12 and 15 as obvious over various art.**

Since claims 10-12 and 15 depend on allowable claim 8, these rejections are moot.

Applicants respectfully request allowance of claims 8-15.

No fee is believed necessary. In the event of any non-payment or improper payment of a required fee, the Commissioner is authorized to charge or to credit **Lucent Technologies Deposit Account No. 12-2325** to correct the error.

Respectfully,



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Date: Nov. 6, 2002

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